

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently amended): A pharmaceutical composition for application at a biodegradable plate-containing site requiring new bone ~~or cartilage~~ formation in a subject, comprising a plurality of bone marrow stromal cells (MSCs) and a pharmaceutically acceptable polymer,

wherein the MSCs are isolated from the subject; are transduced *in vitro* after isolation from the subject with a replication-deficient viral vector comprising a DNA sequence encoding BMP-2 operably linked to a promoter, and are applied at the biodegradable plate containing site in a concentration of about 50×10^6 cells per ml of the polymer.

Claim 2 (Original): The composition as recited in Claim 1 wherein the polymer is selected from a group consisting of alginate and collagen.

Claim 3 (Cancelled).

Claim 4 (Previously presented): The composition as recited in Claim 1 wherein the polymer is collagen type I.

Claim 5 (Currently amended): A method of enhancing new bone ~~or cartilage~~ formation in a subject, comprising:

- a. obtaining a plurality of bone marrow stromal cells (MSCs) from the subject;
- b. transducing the MSCs of step a) with a replication-deficient viral vector comprising a DNA sequence encoding BMP-2 operably linked to a promoter to generate BMP-2 protein producing MSCs;

c. applying a biodegradable plate to a site requiring new bone ~~or cartilage~~ formation on the subject; and

d. applying a composition comprising the BMP-2 protein producing MSCs and a pharmaceutically acceptable polymer to the site wherein the MSCs are present in a concentration of about 50×10^6 cells per ml of polymer,
such that new bone ~~or cartilage~~ formation is enhanced.

Claim 6 (Previously presented): The method as recited in Claim 5 wherein the replication-deficient viral vector is an adenovirus.

Claims 7-10 (Cancelled).

Claim 11 (Previously presented): The composition of Claim 1 wherein the composition is a gel.

Claim 12 (Previously presented): The method of Claim 5 wherein the composition is a gel.

Claim 13 (Previously presented): The composition of Claim 1 wherein the biodegradable plate comprises poly(lactic acid) (PLLA).

Claim 14 (Previously presented): The method of Claim 5 wherein the biodegradable plate comprises poly(lactic acid) (PLLA).